

Clean Set of Amended Claims

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1. (Amended) A parts suction head of a surface mount device, comprising:
 - a motor configured for generating a rotary force and transmitting the rotatory force to a rotation central axis;
 - a ball spline unit configured for performing a rotation movement and a vertical reciprocation movement by the rotary force generated from the motor;
 - a rotation shaft unit comprising a rotation shaft, wherein the rotation shaft unit is configured to be moved in a vertical direction and rotated for sucking or mounting parts; and
 - a plurality of couplings configured for transmitting the rotary force of the rotation central axis to the ball spline unit and for transmitting a rotary force of the ball spline unit to the rotation shaft unit.

 2. (Amended) The parts suction head of claim 1, wherein the plurality of couplings comprise:
 - a first coupling configured for connecting the rotation central axis of the motor to a first end portion of the ball spline unit; and
 - a second coupling configured for connecting a second end portion of the ball spline unit to the rotation shaft unit.

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3. (Amended) The parts suction head of claim 2, wherein a first end portion of the ball spline unit comprises a ball spline nut and the first coupling is connected between the rotation central axis of the motor and the ball spline nut to maintain a predetermined distance m between the rotation central axis and the ball spline nut.

4. (Amended) The parts suction head of claim 2, wherein the second coupling is configured to maintain a predetermined distance m between the second end of the ball spline unit and the rotation shaft unit.

5. (Amended) The parts suction head of claim 1, further comprising a bearing fixed to the ball spline nut and configured to restrict a rotation radius of the rotation shaft unit.

B. Please add new claims 6-14 as follows:

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6. (New) A parts suction head, comprising:
a rotation unit;⁽¹¹⁾
a ball spline unit;⁽¹²⁾
a first coupling that rotationally couples the rotation unit to a first end of the ball spline unit;⁽¹⁴⁾
a rotation shaft configured to rotate and to move vertically in a reciprocal fashion;⁽¹³⁾
and
a second coupling that rotationally couples a second end of the ball spline unit to the rotation shaft.⁽¹⁴⁾
7. (New) The parts suction head of claim 6, wherein the rotation unit comprises a motor.⁽¹⁰⁾
8. (New) The parts suction head of claim 6, further comprising a bearing mounted on the ball spline unit and configured to hold the ball spline unit in a fixed position, but to allow the ball spline unit to rotate.
9. (New) The parts suction head of claim 8, wherein the bearing is configured to align a rotational axis of the rotator unit with a rotational axis of the ball spline unit.

10. (New) The parts suction head of claim 6, wherein the first end of the ball spline ⁽¹²⁰⁾ unit comprises a ball spline nut, and the second end of the ball spline unit comprises a splined shaft.

Bj 11. (New) The parts suction head of claim 10, further comprising a ⁽¹²³⁾ bearing mounted on the ball spline nut and configured to hold the ball spline nut in a fixed position, but to allow the ball spline nut to rotate.

12. (New) The parts suction head of claim 6, wherein the first coupling ⁽¹⁴¹⁾ is configured to separate a lower end of the rotation unit from an upper end of the ball spline unit by a prescribed distance.

13. (New) The parts suction head of claim 6, wherein the second coupling ⁽¹⁴²⁾ is configured to separate a lower end of the ball spline unit from an upper end of the rotation shaft by a prescribed distance.

14. (New) The parts suction head of claim 6, wherein the second coupling is configured to allow the rotation shaft to be detached from the ball spline unit.
